

REMARKS

Claims 1-20 are pending and under consideration. Reconsideration is requested based on the following remarks.

REJECTION UNDER 35 U.S.C. § 102:

Claims 1-8, 11-17, and 19 were rejected under 35 U.S.C. § 102(b) as anticipated by Fleck et al., US 6,128,641 (hereinafter "Fleck"). The rejection is traversed. Reconsideration of the rejection is respectfully requested.

Claim 1 recites,

"selecting a return address corresponding to the second data processing task."

Fleck neither teaches, discloses, nor suggests "selecting a return address corresponding to the second data processing task," as recited in claim 1. A "context/pointer to CSA" does not amount to a return address corresponding to the second data processing task, contrary to the assertion in the Office Action at page 2. Rather, if the "called routine/function" of Fleck is analogized to the second data processing task of the claimed invention, as asserted in the Office Action at page 2, it will not even be found at the "context/pointer to CSA". In Fleck, rather, the pointer points to the *previous* context, i.e. the *calling* function, not the *called* function, as described at column 6, lines 47-54,

The PCX field in the PCXI.PCX-register points to the CSA for the previous context, for example, the context that will be restored when a respective return instruction is executed. It is the list head pointer for a linked list of saved contexts. The saved context it points to could be an upper context or a lower context, depending on whether the preceding context save operation was for a call, interrupt or trap, or for the save context-instruction operation.

Thus, in Fleck, the pointer points to the *previous* context, i.e. the *calling* function, not the *called* function. This is to be contrasted with claim 1, which recites, "selecting a return address corresponding to the second data processing task."

Furthermore, as described in the Abstract of Fleck, a data processing unit switches from a first task to a second task by acquiring a *new* save area from an unused save area, storing the context of the first task in the new area, and linking the *new* area with the previous context save area,

The present invention relates to a method of context switching from a first task to a second task in a data processing unit having a register file with a plurality of general purpose registers and a context switch register, a memory comprising a

previous context save area and an unused context save area. The memory is coupled with the register file and an instruction control unit with a program counter register and a program status word register coupled with the memory and the register file. The method comprises the steps of acquiring a new save area from said unused save area, storing the context of the first task in said new area, linking the new area with said previous context save area.

Thus, in Fleck, a data processing unit switches from a first task to a second task by acquiring a new save area from an unused save area, storing the context of the first task in the new area, and linking the new area with the previous context save area, not by "selecting a return address corresponding to the second data processing task," as recited in claim 1.

Furthermore, as described at column 6, lines 59-66 of Fleck, a context save operation is performed by pulling the first context save area off of the free context list CSA3 and placing it on the front of the previous context list,

When the context save operation is performed, the first context save area in the free context list CSA3 is pulled off and placed on the front of the previous context list. This movement from the free to the previous context list involves the updating of the PCX-register 2e and the FCX-register 2d and the link word of the context save areas being transferred in the following way, as shown in FIG. 3.

Thus, in Fleck, a context save operation is performed by pulling the first context save area off of the free context list CSA3 and placing it on the front of the previous context list, not by "selecting a return address corresponding to the second data processing task." as recited in claim 1.

Furthermore, as described at column 4, lines 11-13 of Fleck, the *calling* routine also has context that must be saved and then restored in order to resume the caller's execution after return from the function,

When a function call is made, the calling routine also has context that must be saved and then restored in order to resume the caller's execution after return from the function.

Thus, in Fleck, the calling routine, not the called routine, also has context that must be saved and then restored in order to resume the caller's execution after return from the function. This is to be contrasted with claim 1, which recites, "selecting a return address corresponding to the second data processing task." Claim 1 is thus submitted to be allowable. Withdrawal of the rejection of claim 1 is earnestly solicited.

Claims 2-8 depend from claim 1 and add further distinguishing elements. Claims 2-8 are thus also submitted to be allowable. Withdrawal of the rejection of claims 2-8 is earnestly solicited.

Claims 11-16:

Claim 11 recites,

“storing a return address corresponding to the second task.”

Fleck neither teaches, discloses, nor suggests “storing a return address corresponding to the second task,” as discussed above with respect to the rejection of claim 1. Claim 11 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 1.

Claim 11 recites further,

“moving said return address from said first storage location to a register of the data processor.”

Fleck neither teaches, discloses, nor suggests “moving said return address from said first storage location to a register of the data processor,” as recited in claim 11. Performing a context switch thereby saving the CSA and creating a new one or returning to a previous CSA does not amount to “moving said return address from said first storage location to a register of the data processor,” contrary to the assertion in the Office Action at page 3 where, as here, the return address is “a return address corresponding to the second task.” The only *return* address in Fleck, rather, is the address of the calling, *i.e.* first task, as discussed above with respect to the rejection of claim 1. Claim 11 is thus submitted to be allowable. Withdrawal of the rejection of claim 11 is earnestly solicited.

Claims 12-16 depend from claim 11 and add further distinguishing elements. Claims 12-16 are thus also submitted to be allowable. Withdrawal of the rejection of claims 12-16 is earnestly solicited.

Claim 17:

Claim 17 recites,

“storing a return address corresponding to the second task.”

Fleck neither teaches, discloses, nor suggests “storing a return address corresponding to the second task,” as discussed above with respect to the rejection of claim 1. Claim 17 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 1.

Claim 17 recites further,

“moving said return address from said storage location to said register.”

Fleck neither teaches, discloses, nor suggests “moving said return address from said storage location to said register,” as discussed above with respect to the rejection of claim 11. Claim 17 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 11. Withdrawal of the rejection of claim 17 is earnestly solicited.

REJECTION UNDER 35 U.S.C. § 103:

Claims 10 and 18 were rejected under 35 U.S.C. § 103(a) as unpatentable over Fleck. Claims 10 and 18 depend from claims 1 and 17, respectively and add further distinguishing elements. Fleck neither teaches, discloses, nor suggests “selecting a return address corresponding to the second data processing task,” as discussed above with respect to the rejections of claims 1 and 17. Fleck neither teaches, discloses, nor suggests “moving said return address from said storage location to said register,” either, as discussed above with respect to the rejection of claim 17.

Finally, the Office Action provides no motivation or suggestion to modify Fleck, as required by 35 U.S.C. § 103(a) and the M.P.E.P. §706.02(j)(D), beyond the assertion that,

“It would have been obvious to one skilled in the art that the second task is a calling function/routine for a further called function.”

To the contrary, as discussed above, the second task in Fleck is a called function, not a calling function. Fleck is complete in itself, there is no reason why the second function should have been anything but a called function. It is submitted, rather, that persons of ordinary skill in the art who read Fleck for all it contained at the time the invention was made would not have been motivated to modify Fleck, as proposed in the Office Action. Claims 10 and 18 are thus submitted to be allowable. Withdrawal of the rejection of claims 10 and 18 is earnestly solicited.

Claims 9 and 20:

Claims 9 and 20 were rejected under 35 U.S.C. § 103(a) as unpatentable over Fleck in view of “Applicant’s Admitted Prior Art.” Claims 9 and 20 depend from claims 1 and 17, respectively and add further distinguishing elements. Fleck neither teaches, discloses, nor suggests “selecting a return address corresponding to the second data processing task,” as discussed above with respect to the rejections of claims 1 and 17. The parts of the Application labeled “Prior Art” do not either, and thus cannot make up for the deficiencies of Fleck with respect to claims 9 and 20.

Fleck neither teaches, discloses, nor suggests "moving said return address from said storage location to said register," either, as discussed above with respect to the rejection of claim 17. The parts of the Application labeled "Prior Art" do not either, and thus cannot make up for the deficiencies of Fleck with respect to claim 20. Claims 9 and 20 are thus submitted to be allowable. Withdrawal of the rejection of claims 9 and 20 is earnestly solicited.

Conclusion:

Claims 1-20 are submitted to be allowable over the cited references. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY/LLP

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